ICT dan Ekonomi Syariah

Asuransi Syariah

Wiku Suryomurti, ST., MSi
http://www.wikusuryomurti.com
http://www.ilmuekonomisyariah.com
wisuryomurti@sisindokom.com
021-93695209
0818-06550839

Tujuan Perkuliahan

- Memahami prinsip dasar asuransi syariah
- Mengerti dan memahami sistem informasi dalam asuransi syariah

• Definisi Teknologi Informasi

Teknologi informasi (*information technology)* biasa disebut TI, IT, atau ***infotech.*** Teknologi informasi lahir sekitar 1947, yang ditandai dengan ditemukannya komputer sebagai komponen utama dimana mulai populer di akhir dekade 70-an. Teknologi Informasi yang diartikan secara harfiah Teknologi (Bahasa Indonesia) dan *Technology* (Bahasa Inggris), berasal dari bahasa yunani ”Techne” yang berarti adalah seni. Teknologi merupakan pembuatan benda-benda yang dapat diamati secara inderawi untuk melayani kebutuhan atau gagasan manusia. Sedangkan Informasi (Bahasa Indonesia) dan *Information* (Bahasa Inggris) berasal dari ”*To-Inform*” yang berarti adalah memberitahu.

Sistem Informasi Perusahaan

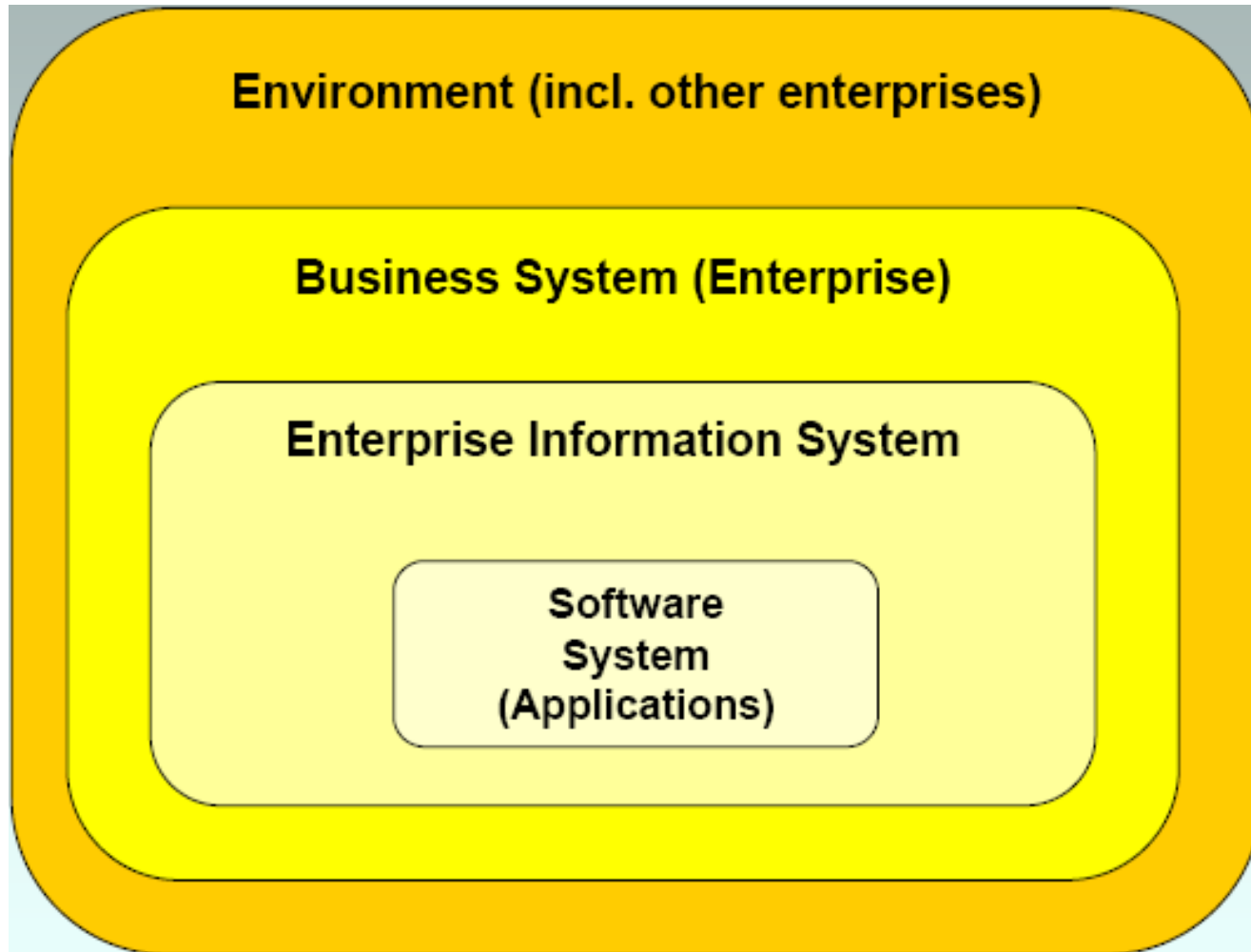
”*Suatu pengorganisasian peralatan untuk mengumpulkan, menginput, memproses, menyimpan, mengatur, mengontrol, dan melaporkan informasi untuk pencapaian tujuan perusahaan*.”

Enterprise information systems

Environment (incl. other enterprises)

Business System (Enterprise)

Enterprise Information System

Software System (Applications)

Komponen Sistem Teknologi Informasi

1. Perangkat keras (*hardware)*
2. Perangkat lunak (*software)*,
3. Orang (*brainware)*

Komputer sebagai pemroses

Informasi

Data

Program

Komponen sistem informasi

Users

Users

Users

Input

Tech

Model

Data

Basee

Output

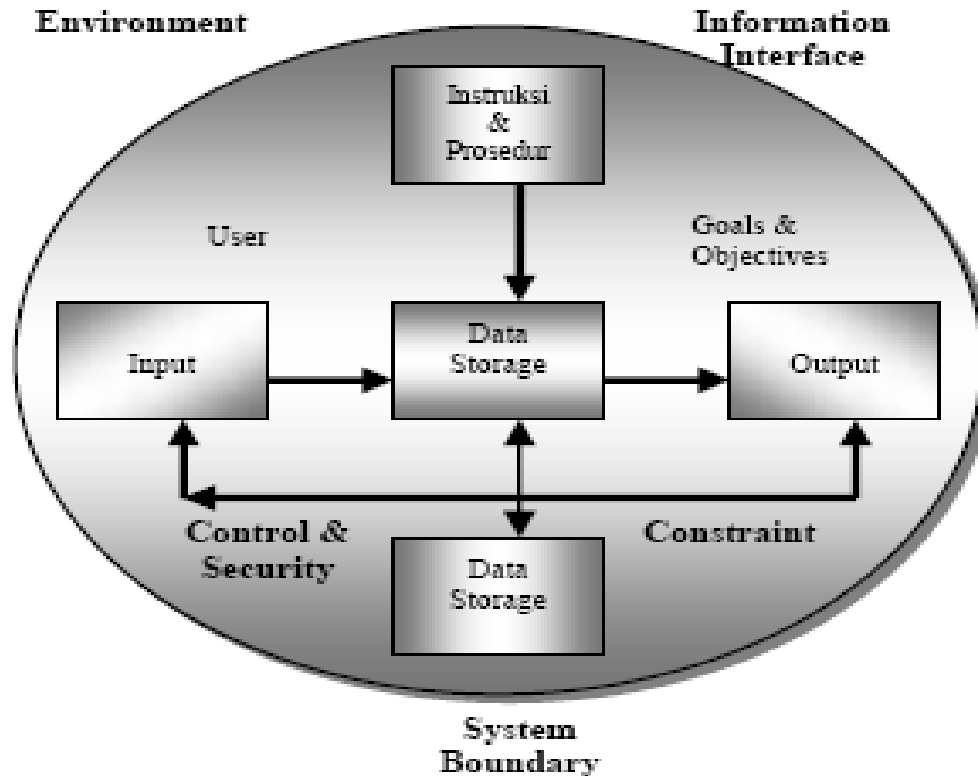
Control

Users

Users

Users

Komponen sistem informasi

Environment
Information Interface
Instruksi & Prosedur
User
Goals & Objectives
Input
Data Storage
Output
Control & Security
Constraint
Data Storage
System Boundary

Komputer adalah sistem elektronik untuk memanipulasi data yang cepat dan tepat serta dirancang dan diorganisasikan supaya secara otomatis menerima dan menyimpan data input, memprosesnya, dan menghasilkan output di bawah pengawasan suatu langkah-langkah instruksi-instruksi program yang tersimpan di memori (*stored program*). Komputerisasi merupakan aktivitas yang berbasis pada komputer (*Computer Based System*).

Lingkungan Sistem Informasi Komputer

- *Database* adalah koleksi data yang dibagi *(shared)* dan digunakan oleh sejumlah pemakai yang berbeda untuk tujuan yang berbeda-beda. *Database system* terdiri dari dua komponen pokok-*database* dan *database management system (DBMS).*
- *Database system* dapat digunakan dalam sistem komputer apa saja, termasuk sistem komputer mikro. Dalam beberapalingkungan komputer mikro, *database system* digunakan oleh pemakai tunggal.

ASURANSI SYARIAH

Proses Utama

Automatic policy administration

Reserves
Non-forfeiture options
Bonuses
UL Charges
Loans Processing
Interests
Reinsurance adjustments

Customer requests

Investment account transactions
Premium payment
Policy request
Claim Notification

UL Processing
Premium Processing
Commissions
Policy Administration (underwriting and annexes processing)
Reinsurance
Claim adjustment
Settlement

Accounting interface

External Financial System

(GL, Account payables, Account receivables)

SUMBER PENDAPATAN PERUSAHAAN ASURANSI

PERUSAHAAN

ROI	SHARE PROFIT / SURPLUS	SHARE PROFIT ROI
SHAREHOLDER FUND	PARTICIPANT FUND (NON SAVING)	PARTICIPANT FUND (SAVING)

KONSEP TAKAFUL

SHAHIBUL MAAL

SHAHIBUL MAAL

TABARRU'
(MUDHARIB)

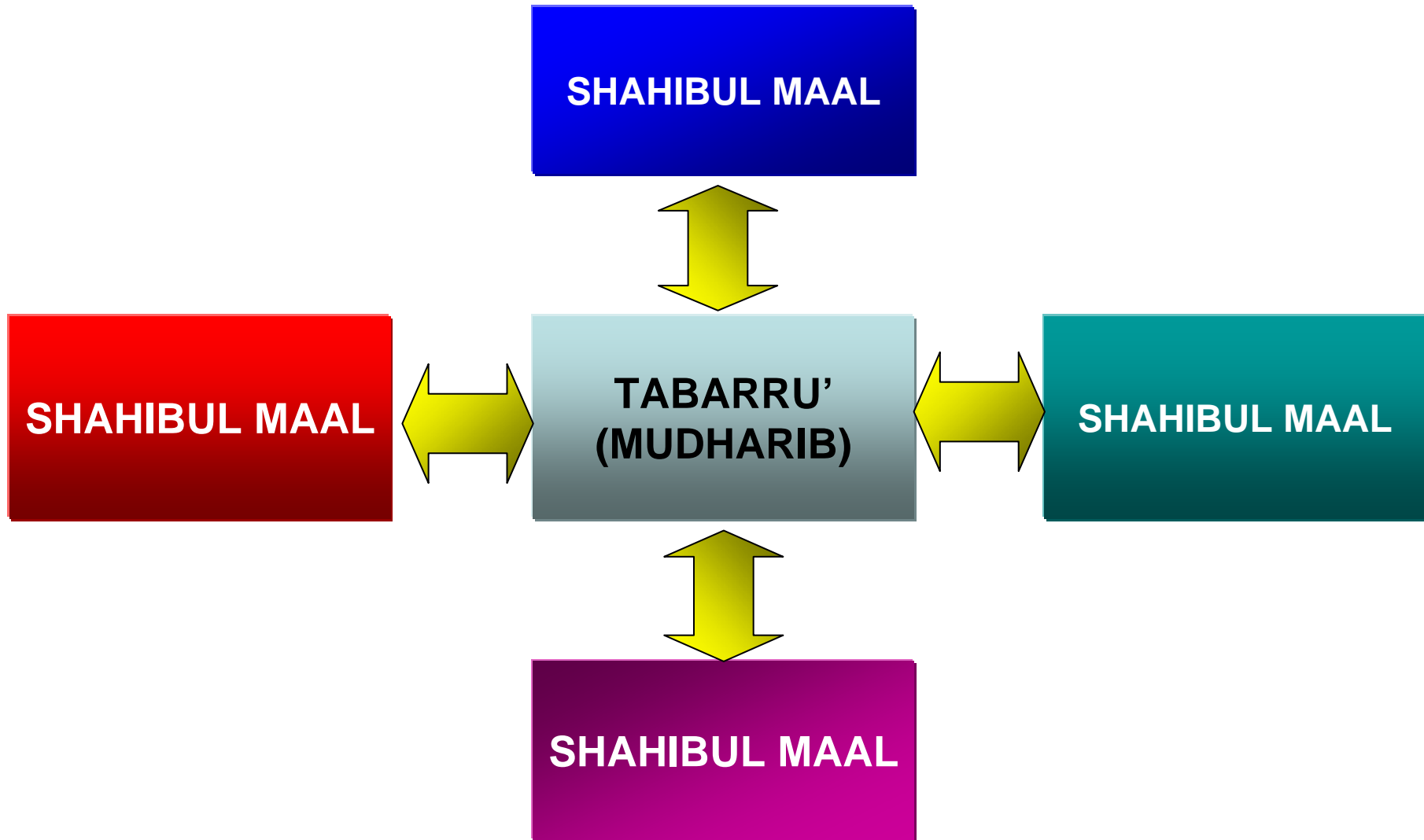
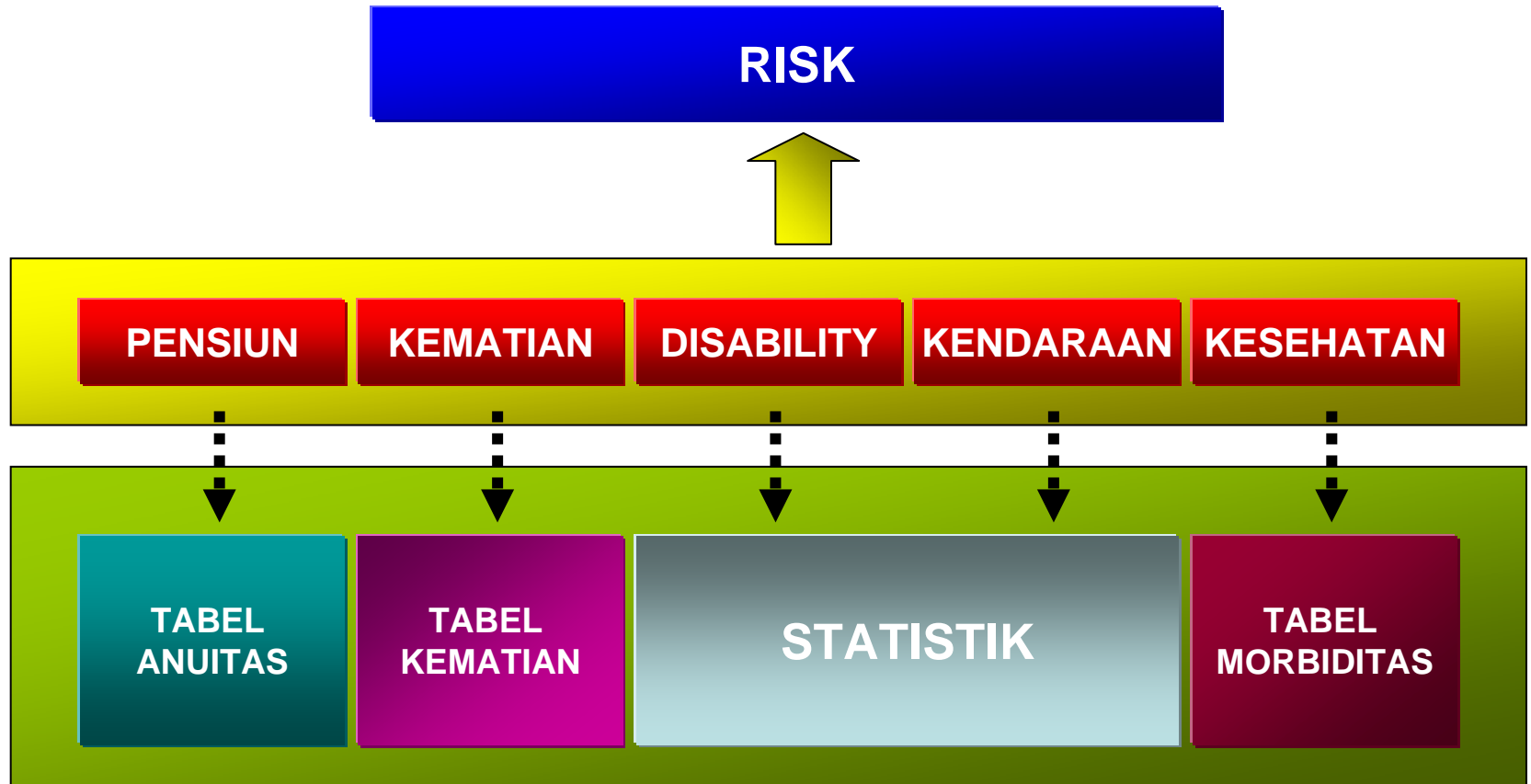
SHAHIBUL MAAL

SHAHIBUL MAAL

KONSEP TAKAFUL

RISK

PENSIUN | KEMATIAN | DISABILITY | KENDARAAN | KESEHATAN

TABEL ANUITAS | TABEL KEMATIAN | STATISTIK | TABEL MORBIDITAS

- The insurance industry is totally dependent on the ability to convert raw data into intelligence - intelligence about customers, markets, competitors, and business environment. Over the years data processing technology has progressed phenomenally and tools like data warehousing, OLAP and data mining, which constitute the cornerstone of an effective business intelligence (BI) environment, have been widely accepted across industries.
- However, insurance companies have been relatively slow in adopting these tools, primarily because of lack of competition due to protective regulations. But now, they can no longer afford to be complacent as the Internet, deregulation, consolidation, and convergence of insurance with other financial services are fast changing the basic structure of the industry.

- **New Distribution Channels:** New distribution channels are fast catching up with the traditional insurance agent. Though these channels are not a major threat as yet, they are rapidly changing the way insurers and customers interact with each other.
- **Focus on Customer Relationship Management:** The only viable strategy for insurers today is to focus on the needs of the customers and strive to serve them better. Customers have extremely differentiated needs and, also, the profitability of individual customers differs significantly; hence, an effective CRM strategy be comes the most vital component of an insurer's overall business strategy.

The Insurance Value Chain

Corporate Management

Human Resource Management

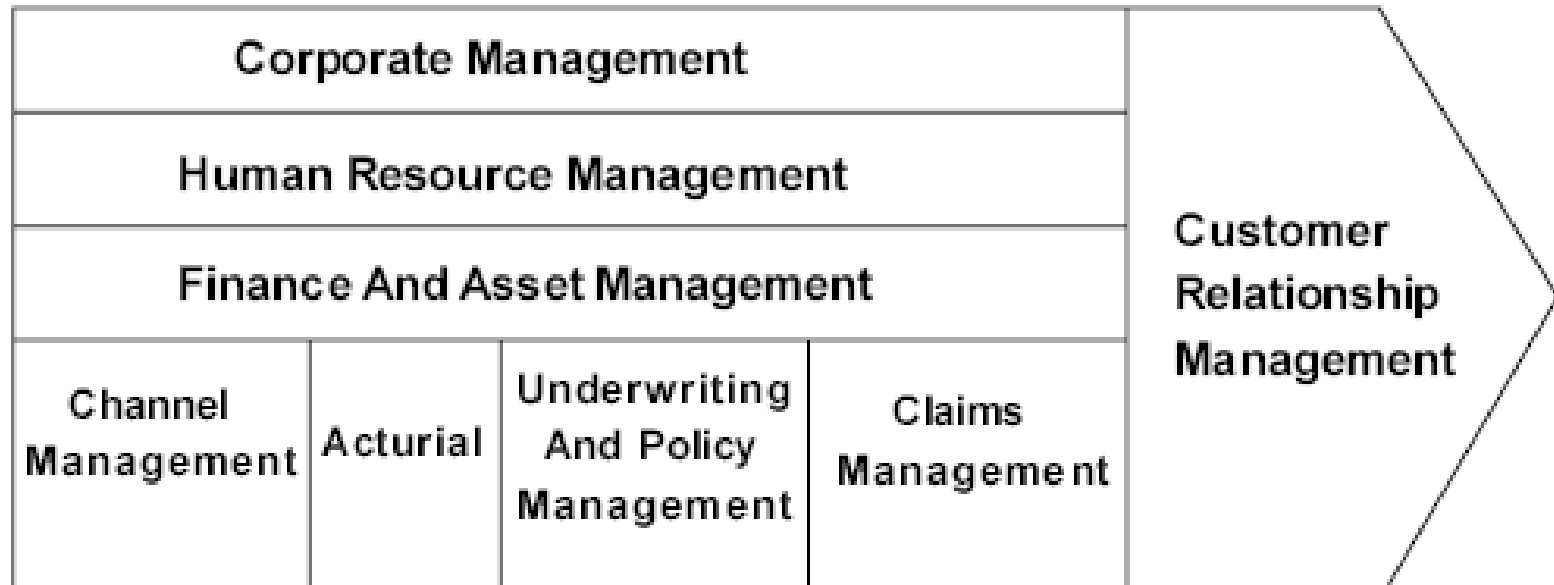
Finance And Asset Management

Channel Management

Acturial

Underwriting And Policy Management

Claims Management

Customer Relationship Management

- **Figure 1:** Insurance Value Chain

Customer Relationship Management

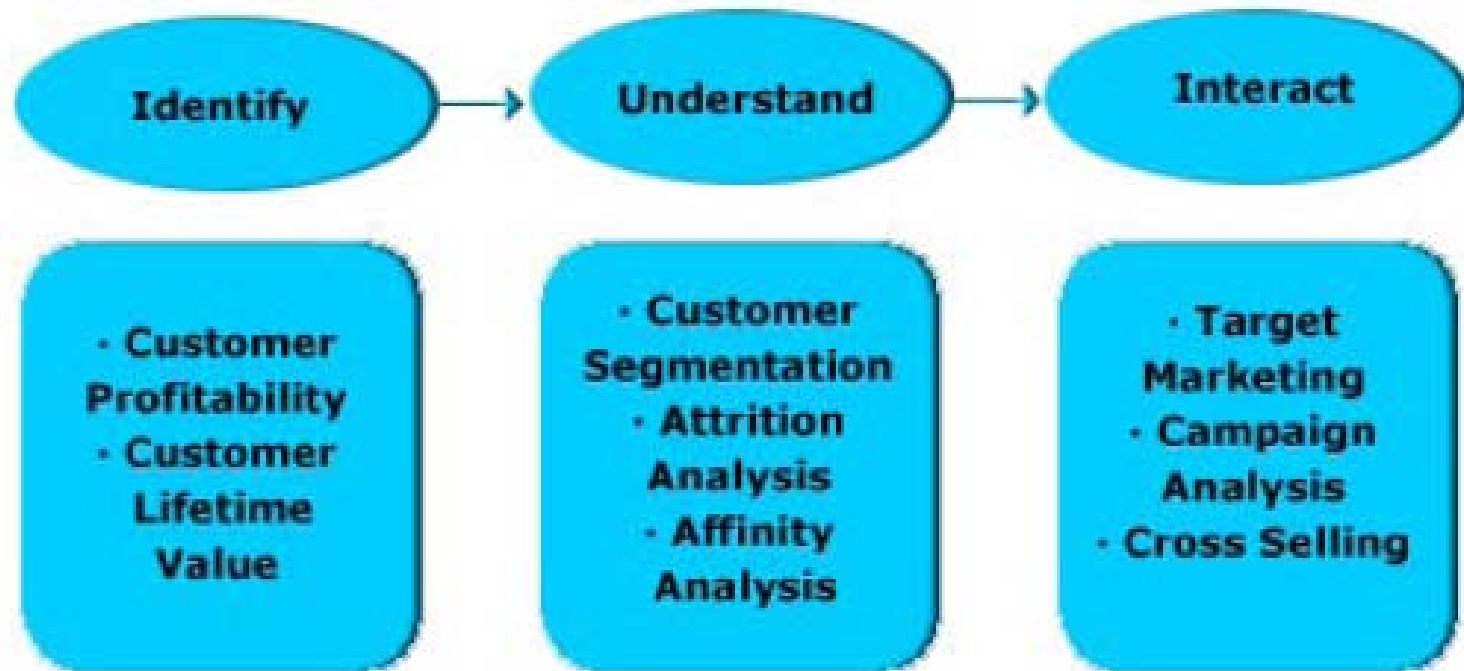
- A typical insurance company has a huge customer base, varied product lines with number of products within each line, many distribution channels, and a market spread across geographies. To effectively interact with customers and design suitable products, the Insurer's CRM strategy has to fully utilize the potential of technology. The insurer has to leverage the vast pool of data at each step in the CRM process, and use the insight gained for developing new products and services to meet the ever-changing needs of the customers.

CRM ASURANSI

Identify → Understand → Interact

Identify
- Customer Profitability
- Customer Lifetime Value

Understand
- Customer Segmentation
- Attrition Analysis
- Affinity Analysis

Interact
- Target Marketing
- Campaign Analysis
- Cross Selling

Customer Relationship Management

- The CRM process in an insurance company has three steps:

1. Identify the most profitable or potentially profitable customers for future interaction,
2. Understand their needs and buying patterns, and
3. Interact with them so as to meet all of their expectations.

Identify → Understand → Interact

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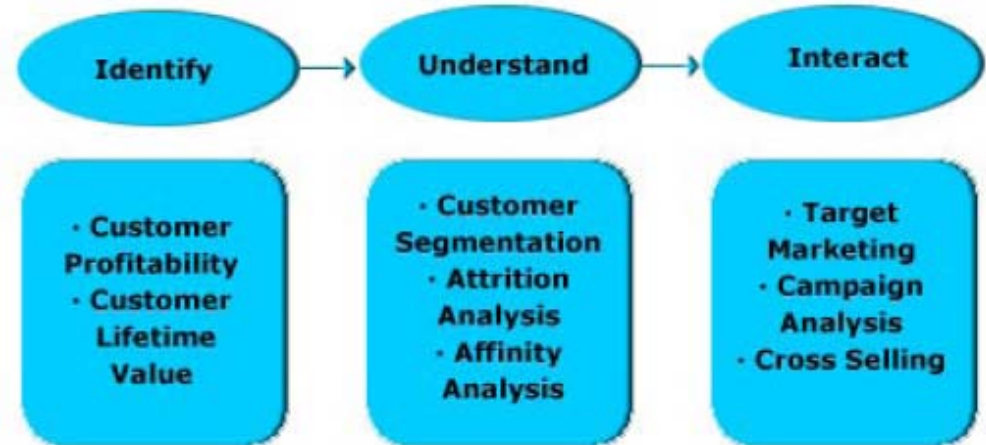
- **Customer Profitability:**

  Rather than simply acquiring new customers, it is vitally important to retain and increase the profitability of existing ones. Identifying the most profitable customers is the first step in that direction. To arrive at the overall profitability of a customer, insurers must quantify (a) the costs involved in serving the customer over a period and (b) the revenues realized from the customer during that period. The results of customer profitability analysis can point towards the reasons behind why some customers are not as profitable as others are. For example, a customer might be unprofitable because the products used by her do not match her risk profile. Customer profitability analysis can significantly help in developing new products and customizing existing products for a customer or customer segment.

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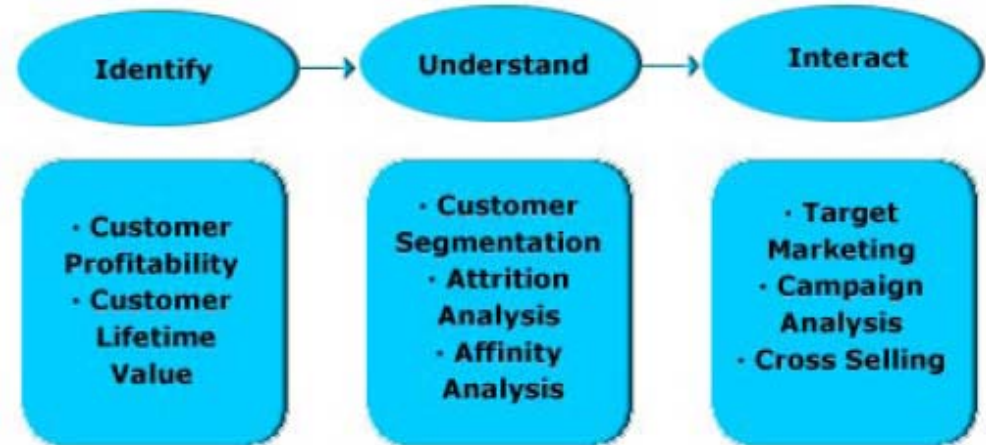
- **Customer Lifetime Value:**

  Customer profitability is not the sole measure of a customer's value to the insurance company. A customer may have the potential of buying profitable products in the future; she may also serve as an excellent reference for more profitable customers. Customer Lifetime Value (LTV) is, hence, a more insightful measure. Often data mining tools are used to model customer lifetime value, taking into account all the factors that have a bearing on the customer's value over the entire course of her relationship with the insurance company.

Identify → Understand → Interact

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· Customer Lifetime Value

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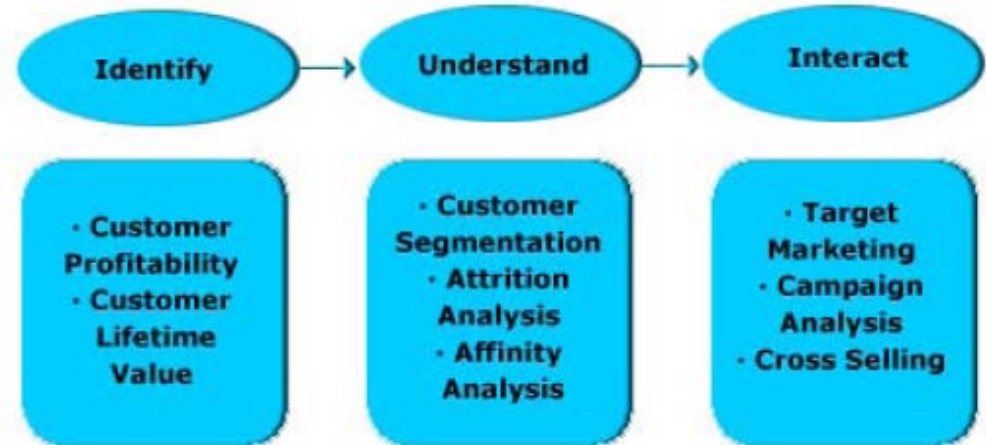
- **Customer Segmentation:**
- Segmentation is used to segregate customers, who exhibit common characteristics, in different segments. These segments can then be treated as distinct entities and the future interaction with them can be tailored accordingly. Customer segmentation can save a lot of marketing effort, which would otherwise go waste. Often data mining tools are used for customer segmentation.
- These tools use 'clustering' algorithms for segmenting the entire customer base into clusters, identified on the basis of various demographic and phsychographic factors.

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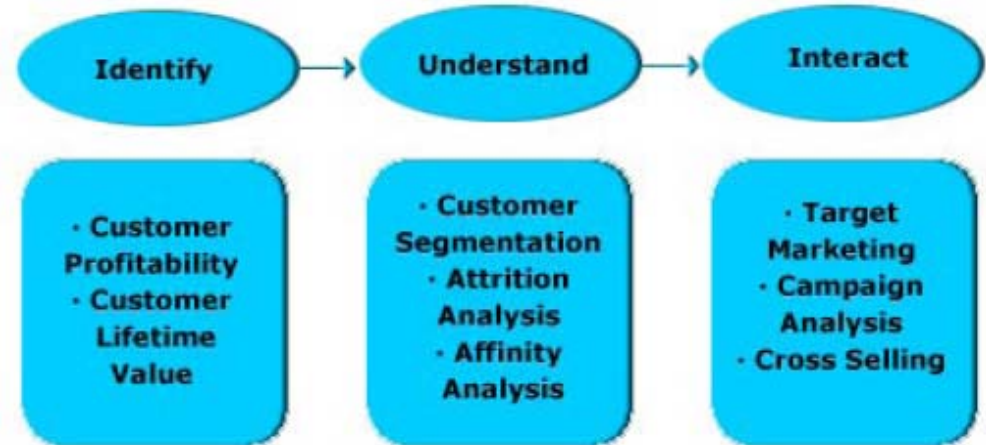
- **Attrition Analysis.**

  Studies have shown that across industries, acquiring new customers is much more costly than retaining existing ones. This is especially true for insurance. Typically, buying an insurance product is a long-term decision for a customer; and if she decides to switch, it is very likely that she will not come back. Hence retaining the existing customers in of paramount importance; customer attrition analysis is the first step in this direction. It involves analysis of data captured during individual customer contacts at the various touch points. For attrition analysis, customer contact data is coupled with other data sources like claims and policies; the resultant data set is then associated with customers who have switched to analyze the possible reasons behind this decision. The results can also be used to improve the performance of customer touch points.

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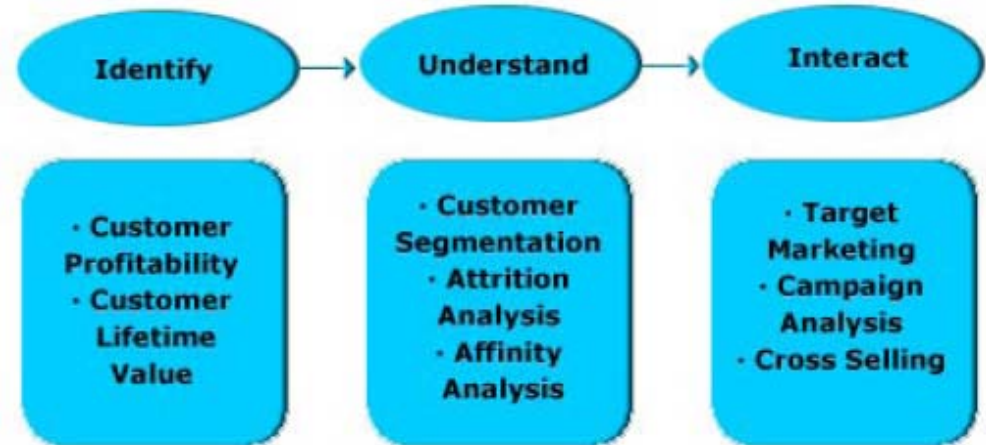
- **Affinity Analysis**: It is often referred to as market-basket analysis. Certain products show an affinity towards each other, and are likely to be bought together. For example, a man in his early thirties who buys a life insurance policy might also be interested in a certain type of annuity. These affinities can be, at times, extremely difficult to unearth and often data mining tools are used for this purpose. These tools use a technique called 'association analysis' for arriving at the right combination of products and services for a customer or customer segment .

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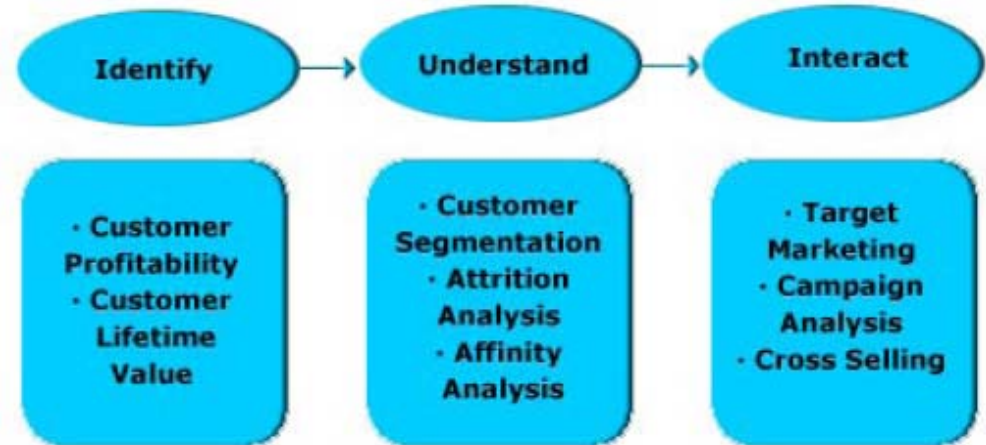

- **Target Marketing**: Target marketing - marketing to a specific customer group - is a natural outcome of customer segmentation. Once distinct customer segments are identified, BI tools can be used to study the products likely to be bought by the segment. Often data mining is used to develop predictive models to establish the buying propensity of a segment towards various existing or new products. Armed with this knowledge, marketing managers can design specific campaigns targeted at individual segments.

- **Campaign Analysis**: Campaign analysis is used to analyze the effectiveness of a marketing or promotion campaigns. The effects of a particular campaign on sales of the promoted product can be tracked using BI tools. Often the surge in sales of the promoted product can result in decrease in sales of other related products. BI tools can also help identify such relationships. The campaign data is stored in a data warehouse and can be used to predict the effectiveness of similar campaigns in future.
- **Cross Selling**: Cross selling is a major source of revenue for insurance companies. For effective cross selling, an insurer can leverage the data - housed in the data warehouse - to quickly zero down on the new products that would be required by its existing customers. These can then be offered to them during the next contact.

CHANNEL MANAGEMENT

Channel Management

Agent and Sales Force Deployment

Channel Analysis

Agent Development and Relationship Management

E Business Development

ACTUARIAL DAN CLAIM MANAGEMENT

Actuarial

- Risk Modeling
- Reinsurance
- Profitability Analysis

Claim Management

- Claims Analysis
- Fraud Detection
- Claims Estimation

Finance and Asset Management

- The role of financial reporting has undergone a paradigm shift during the last decade. It is no longer restricted to just financial statements required by the law; increasingly it is being used to help in strategic decision making. Historically, interest earned on investments has been a major source of income for insurers and this income has greatly contributed to the overall profitability of insurance industry; at the same time underwriting costs have drastically brought down profitability.
- To compete in this market, insurers need to increase their return on investments and bring down underwriting costs. This requires ready access to financial data for analysis purposes. Many companies, in an attempt to improve financial reporting and decision making, have integrated their financial data in a Financial Data Warehouse

Finance and Asset Management

Finance and Asset Management

Budgeting

Asset Liability Management

Financial Ratio Analysis

Web Reporting and Analysis

Human Resources Management

Human Resources Management

Human Resource Reports/ Analytics

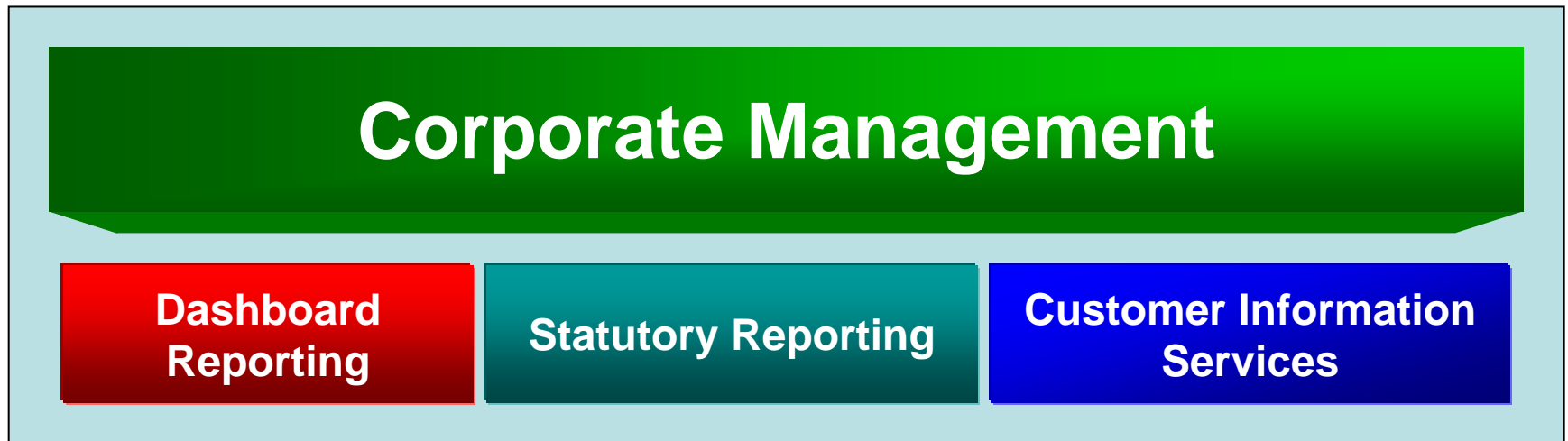
Manpower Allocation

Training and Succession Planning

HR Portal

Corporate Management

- **Dashboard Reporting:**
- **Statutory Reporting:**
- **Customer Information Services:**

Corporate Management

Dashboard Reporting	Statutory Reporting	Customer Information Services

MAJOR FUNCTIONS OF SYSTEMS:

- Budgeting, general ledger, billing, cost accounting

MAJOR APPLICATION SYSTEMS:

- General ledger, accounts receivable, accounts payable, budgeting, funds management systems

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The Insurance Functional Solution Map

Front Office

Back Office

Corporate Admin

Document Management and Archival

Business Process Management

Intermediary Support | Intermediary Management | Intermediary Training and Accreditation

Call Center (Intermediary/Direct) | Customer Maintenance | Customer Self Service

Customer Data Management Hub

Business Integration and Information Architecture

Product Modeling (Actuarial Design) | Market Research | PR & Communications

Policy Issuance Underwriting (General) | Policy Issuance Underwriting (Life)

Policy Processing | Billings, Collections & Disbursements | Incentive Compensation

Claim Management (General) | Claims/Maturity Management (Life) | Claims Accounting | Claims Recovery Risk Management

Reinsurance Underwriting Retrocession | Reinsurance Claims | Reinsurance Accounting | Treaty Administration Risk Management

Asset Allocation | Portfolio Management | Portfolio Accounting | Portfolio Controlling

Business Integration and Information Architecture

Financial Data Management Hub

Product Configuration Hub

Data-warehouse

Business Intelligence

Risk Management | Fixed Assets | Budgeting and Planning (Analytics)

Human Capital Management | Purchasing | Finance & Reporting

Data Hubs | SEIBEL | EBS/PSFT | ISV | SEIBEL/EDW | FUSION MIDDLEWARE